Washington State Department of Health Office of Environmental Health & Safety



School Rule Development Committee Proposals July 2005

The School Rule Development Committee (SRDC) considered proposals and recommendations developed by three workgroups in May and June 2005. The workgroups—Safety (SAF), Drinking Water (DW), and Indoor Air Quality (IAQ)—had addressed a range of issues in their topic areas. The workgroup proposals were consolidated into 25 proposals for consideration by the SRDC; ordered by the School Facility Health & Safety Principles of:

- ► Site School Facilities Wisely
- ► Design Schools Appropriately
- ► Construct Schools as Designed
- ► Operate & Maintain Schools Effectively
- ► Oversee & Assure School Facility Health & Safety Principles are Applied

For each of the consolidated proposals, the individual elements which made up the proposal are recorded, edited for clarity and presentation. These are in the final form approved by the SRDC. The alpha-numeric code identifies the workgroup and proposal number referenced in the *Revised Cross-walk Matrix Linking Workgroup Proposals & Recommendations to the SRDC Consolidated Proposal*.

In their review of the 25 consolidated proposals the committee often selected to identify their level of support for the ideas presented by creating sub-groupings of proposals. Where this was done, the material below displays Proposal numbers with letters to delineate proposals.

As a final activity, the SRDC consider proposals on issues not covered by the technical workgroups. These are presented as Proposal 26 - 32. With some numbered proposals presented with sub-grouping letters, such as 1A and 1B, there are a total of 47 proposals.

The members and alternates of the SRDC completed their work July 12, 2005.

EH&S Principle: Site School Facilities Wisely—

Topic: Environmental Site Assessment

Issue / Current Status:

The Washington Administrative Code (WAC) currently requires site approval by Local Health Jurisdictions (LHJ). The language is somewhat vague. Environmental Site Assessments (ESA) is used to evaluate building sites prior to development. Phase 1 ESAs are the initial review, involving research into the history of the property and surrounding area, and are used to determine if there is a need for further assessment. Identification of environmental problems prior to construction allows for informed choices to be made concerning future development on the proposed site.

SRDC Proposal #1: Consolidated Proposal for Environmental Site Assessment

1A

Sites that are proposed for development of school facilities are to be subjected to a Phase I Environmental Site Assessment at the appropriate time in the school development timeline. The Phase I ESA is the first step to identifying and addressing the impact of site characteristics on school facility development and operation. (IAQ07)

In conjunction with the Phase 1 ESA proposed school sites are to be evaluated for the potential presence of soil contamination, especially in areas to be used for playgrounds and sports / play fields. Soil sampling resulting from this site evaluation will follow soil sampling protocols in accordance with accepted public health scientific protocols. Soil remediation as needed will be integrated into school design and construction planning. (SAF06)

1B

Soils in play areas of existing schools are to be evaluated if past practices are identified that could have led to soil contamination. (SAF07)

SRDC Recommendation 1A:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 1A be addressed in RULE .	16	13	3	0
Recommend to DOH that SRDC Proposal # 1A be addressed in <i>GUIDANCE</i> .	16	3	9	4
SRDC Recommendation 1B:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 1B be addressed in <i>RULE</i> .	15	3	4	8
Recommend to DOH that SRDC Proposal # 1B be addressed in GUIDANCE.	16	12	4	0

EH&S Principle: Design Schools Appropriately—

Topic: School Facility Design Standards—

Addressing Health & Safety Matters Early in the Design Phase

Issue / Current Status:

The Washington State legislature enacted a law in 2005 requiring schools to build to the LEED Silver, Washington Sustainable Schools (WSS) Protocol, or similar standard for energy efficiency, sustainability, and environmental health. WSS is more appropriate for schools with their high occupancy classrooms and need for good indoor environments to promote health and learning. WSS is similar to California's Collaborative for High Performing Schools. (Administrative code must be consistent with state statute. DOH staff will address this needed consistency as they develop the DRAFT rule.)

Safety consideration is critical in building design. Fall hazards, attractive nuisances, emergency response, classroom and building evacuation, crime prevention, safety during maintenance activities, etc. are all issues to be considered in design. Early design plan review by the LHJ can provide assistance in these areas of their expertise.

SRDC Proposal # 2: Consolidated Proposal for School Facility Design

2A

School facilities are to be designed according to regionally-appropriate design standards, such as those delineated in the Washington Sustainable Schools Protocol. (IAQ09)

2B

LHJs are to interact with the project design team early in the design development phase to address potential health & safety issues. (IAQ17)

SRDC Recommendation 2A:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 2A be addressed in RULE .	16	7	1	8
Recommend to DOH that SRDC Proposal # 2A be addressed in <i>GUIDANCE</i> .	16	9	7	0
SRDC Recommendation 2B:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 2B be addressed in <i>RULE</i> .	16	9	5	2
Recommend to DOH that SRDC Proposal # 2B be addressed in <i>GUIDANCE</i> .	16	7	6	3

EH&S Principle: Design Schools Appropriately—

Topic: Standards-of-Practice for Design of Mechanical Systems—Heating, Ventilation, & Air Conditioning

Issue / Current Status:

The American Society of Heating, Refrigerating, & Air-Conditioning Engineers (ASHRAE) standards 62.1-2004 and 55-2004 are the bench mark documents that are used to design heating, ventilation, and air-conditioning (HVAC) systems. They include parameters for temperature, humidity, and ventilation rates. Chapter 51-13, WAC, is based on ASHRAE standards. IAQ concerns have occurred in schools due to friable material and/or mold growth inside air ducts and the re-entrainment of pollutants into ventilation systems.

SRDC Proposal #3: Consolidated Proposal for Heating, Ventilation, & Air Conditioning

3A

The standards for ventilation system design, construction, installation and performance in school facilities are to be consistent with those established in Chapter 51-13 WAC. (IAQ01)

Interior surfaces of air handling ducts are to be smooth, non-friable and cleanable when renovating ducts in existing school facilities and in new construction and remodeling. (IAQ06)

The potential for entrainment of ambient pollutants and re-entrainment of emitted pollutants and moisture into the air handling systems is be specifically addressed during design development and plan review phases. (IAQ11)

The minimum temperature currently established in the SBOH rule is to be retained in the rule. (IAQ29)

3B

A maximum temperature (linked to humidity levels) is to be established. (IAQ30)

SRDC Recommendation 3A:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 3A be addressed in <i>RULE</i> .	15	10	4	1
Recommend to DOH that SRDC Proposal # 3A be addressed in <i>GUIDANCE</i> .	15	6	6	3
SRDC Recommendation 3B:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 3B be addressed in <i>RULE</i> .	16	6	3	7
Recommend to DOH that SRDC Proposal # 3B be addressed in GUIDANCE.	16	7	8	1

EH&S Principle: Design Schools Appropriately—

Topic: Design of Spaces With Unique Needs / Laboratories, Career & Technical, Health

Issue / Current Status:

Special use areas may need more fresh air, increased air exchanges and filtration, to be under negative pressure, and separated from the ventilation system of the main building. There may also need to be purge fans for quick evacuation of air. Provision should be made in design for safe storage of hazardous chemicals.

SRDC Proposal #4: Consolidated Proposal for Spaces With Unique Needs

The standards used for ventilation system design, construction, installation and performance in school facilities are to address the unique needs presented by special use areas, such as health rooms, science labs, and career & technical instructional areas. (IAQ03)

The language in WAC 246-366-050(6) is to say "hazardous chemicals" instead of "poisonous compounds." Chemicals are to be properly labeled, used only when necessary, and stored in appropriate rooms or cabinets with appropriate ventilation to prevent unauthorized use, food contamination, or a fire or exposure hazard. (SAF15, SAF18)

SRDC Recommendation:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 4 be addressed in RULE .	16	16	0	0
Recommend to DOH that SRDC Proposal # 4 be addressed in <i>GUIDANCE</i> .	16	1	8	7

EH&S Principle: Design Schools Appropriately—

Topic: Lead Content in Piping & Plumbing Fixtures

Issue / Current Status:

Lead and cadmium leaching into drinking water have been of concern in some schools due to "no-lead" fixtures actually being up to 8% lead and poor quality galvanized pipe with cadmium contamination. When designing schools using galvanized pipe, specifying the type of piping to be used will prevent inferior pipe installation.

SRDC Proposal # 5: Consolidated Proposal for Lead Content in Piping & Plumbing Fixtures

<u>New language of DW37:</u> Require "no lead" fixtures, fittings, solder and piping for all new school buildings, and when replacing fixtures, fittings, and piping. (DOH staff will research this topic further for identifying what "no lead" means.). (REVISED DW37)

For all new school buildings, and when replacing fixtures, fittings, and piping, galvanized pipe used for drinking water must meet appropriate ASTM standards. (DOH staff will research for the ASTM standards.). (DW38)

SRDC Recommendation:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 5 be addressed in RULE .	16	16	0	0
Recommend to DOH that SRDC Proposal # 5 be addressed in <i>GUIDANCE</i> .	Not voted on			

EH&S Principle: Design Schools Appropriately—

Topic: Integrated Pest Management

Issue / Current Status:

The field of pest control in public buildings is evolving towards the use of least toxic pesticides, used only when necessary and when non-chemical means of control cannot be used. Building design is important in preventing pest problems, providing for storage of food in ways that will not attract pests, building pests out, and reducing the need for herbicides by making mechanical control more feasible. Adequate soil preparation and selection of native vegetation will reduce the need for water and chemicals.

SRDC Proposal # 6: Consolidated Proposal for Integrated Pest Management

Integrated Pest Management (IPM) is to be used. IPM is defined in state statute (RCW) and characterized as a flexible, planned approach to pest control which maximizes pest prevention and uses multiple methods (physical, mechanical, biological, and chemical) to control pests. The basic elements of a school IPM program would include Prevention, Pest monitoring, Use of least-hazardous methods, and Communication. Specific guidance would be in the K12 H&SG to address formulating IPM programs for schools. (SAF29)

SRDC Recommendation:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 6 be addressed in RULE .	15	11	2	2
Recommend to DOH that SRDC Proposal # 6 be addressed in <i>GUIDANCE</i> .	15	5	9	1

EH&S Principle: Design Schools Appropriately—

Topic: Selection of Ancillary Equipment / Playgrounds & Athletic Fields

Issue / Current Status:

There are currently no regulations in Washington State for playgrounds, athletic fields, or equipment. The Consumer Product Safety Commission (CPSC) and ASTM have voluntary guidelines for playground equipment, surfacing, and spacing. Installation of homemade or used playground equipment that does not meet CPSC / ASTM standards for equipment or installation presents a risk for students. EPA has stopped the production of certain types of treated wood for health reasons, but these woods may still be available on the market or in established play areas where they need to be monitored or remediate.

SRDC Proposal #7: Consolidated Proposal for Selection of Ancillary Equipment

A new section in WAC will address playgrounds & playground equipment, specifically the requirements for existing facilities and the development of new facilities. Included will be the use of new and used equipment. This new section will relate to the plan review portions of the WAC to assure that review & approval occurs in the planning process as appropriate. (SAF01)

The installation of used or homemade playground equipment that has not been reviewed and approved by the LHJ or a Certified Playground Safety Inspector, as consistent with the "standard of practice" for playground equipment is prohibited. (SAF02)

Playground equipment & surfacing must be constructed to meet the ASTM standards and be installed consistent with the manufacturer's instructions and the CPSC guidelines.

- ASTM F 1487-01: Standard Consumer Safety Performance Specification for Playground Equipment for Public Use
- ASTM F 1292: Method to Test Impact Attenuation of Safety Surfacing for Playgrounds
- Consumer Product Safety Commission Handbook for Public Playground Safety, 1997 (SAF03)

Chromated copper arsenate (CCA) or creosote treated wood shall not be used in new playground equipment installations, or the repair or modification of existing playground and landscape structures exposed to children. Plans for replacement or remediation of contamination from CCA treated lumber & playground equipment are to be developed. Current EPA guidance for treated wood products for play sets is recommended. EPA / CPSC guidance for applying penetrating coatings such as oil-based semi-transparent stains (frequency varies depending on the climate) is also recommended. (SAF20)

SRDC Recommendation:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 7 be addressed in <i>RULE</i> .	15	9	1	5
Recommend to DOH that SRDC Proposal # 7 be addressed in <i>GUIDANCE</i> .	15	7	8	0

EH&S Principle: Construct Schools as Designed—

Topic: Assist & Assure Proper Construction / Constructability Review, Commissioning

Issue / Current Status:

Constructability review, construction management and commissioning are designed to assure that buildings operate properly and in accord with their design. Following a General Administration review of school construction in the 90's, Chapter 180-27-080, WAC, was enacted by the Legislature to require (and pay for) value engineering, constructability review, and building commissioning; but only on state match projects. Improved coordination between local building officials and LHJs will assist in plan review and pre-opening inspections that address health and safety concerns.

SRDC Proposal #8: Consolidated Proposal for Assisting & Assuring Proper Construction

8A

All school facility construction projects requiring a building permit obtained from the local building official are to undergo a constructability review. (IAQ10)

The results of the constructability review are to be provided to LHJs. (IAQ12)

8E

All new and remodeled school facilities are to undergo commissioning. (IAQ13)

8C

OSPI-recognized construction management concepts are to be applied to new and remodeled school construction projects which require a building permit. (IAQ15)

8D

As a condition of granting a Temporary Occupancy Permit for new or remodeled school facilities by local building officials, a written plan addressing the health and safety conditions of such temporary occupancy and the time frames for meeting or correcting the identified conditions is be reviewed and approved by the LHJ. (IAQ25)

8E

Building plan reviews are to address requirements for "lead free/no lead" materials to ensure that "lead free/no lead" materials will be used. (DW39)

Construction inspection is to assess that "lead free/no lead" materials were used. (DW40)

8F

To assure that building codes and health protections are addressed in a cohesive and comprehensive manner the local building code official and the local health official are to share with each other the results of their review of plans and specifications for school construction projects requiring a building permit. (IAQ16)

SRDC Recommendation 8A:	No vote. May return to issue.	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 8A	be addressed in RULE .	Committee declined to vote on 8A.			
Recommend to DOH that SRDC Proposal #8A	be addressed in GUIDANCE.				
SRDC Recommendation 8B:		# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 8B	be addressed in RULE .	14	12	0	2

14	0	10	4
# Voting	GRN	YEL	RED
14	4	6	4
14	6	7	1
# Voting	GRN	YEL	RED
14	8	2	4
14	7	6	1
# Voting	GRN	YEL	RED
14	13	0	1
14	1	8	5
# Voting	GRN	YEL	RED
14	8	3	3
14	7	6	1
	# Voting 14 14 # Voting 14 14 # Voting 14 # Voting 14 # Voting 14 14	#Voting GRN 14 4 14 6 #Voting GRN 14 8 14 7 #Voting GRN 14 13 14 1 #Voting GRN 14 8	#Voting GRN YEL 14

EH&S Principle: Operate & Maintain Schools Effectively—

Topic: Monitor Mechanical Systems & Structures

Issue / Current Status:

A school's maintenance and operations program assures that the building functions as designed and that any indoor environment issues that occur after occupancy are addressed in a timely and appropriate fashion. Optimal operation of building mechanical systems provides an environment protective of health.

SRDC Proposal #9: Consolidated Proposal for Monitoring Mechanical Systems & Structures

9A

The use of CO₂ measurement in occupied spaces as a means of assessing ventilation system performance is a part of an on-going facility operation & maintenance program by trained and qualified personnel. (IAQ02)

9B

Existing school facilities are to undergo HVAC repair / correction, of suitable scope, in response to persistent and significant HVAC-related IAQ events. (IAQ14)

9C

 CO_2 levels greater than 700 ppm over ambient level is a threshold level for further evaluation of ventilation system performance. (IAQ05)

9D

To prevent and limit mold growth, timely and appropriate response to water intrusion and moisture accumulation within the school facility requires diligent surveillance and immediate corrective action (24 to 48 hours from time of discovery). (IAQ23)

SRDC Recommendation 9A:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 9A be addressed in <i>RULE</i> .	14	8	4	2
Recommend to DOH that SRDC Proposal # 9A be addressed in <i>GUIDANCE</i> .	14	6	8	0
SRDC Recommendation 9B:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 9B be addressed in <i>RULE</i> .	13	7	3	3
Recommend to DOH that SRDC Proposal # 9B be addressed in <i>GUIDANCE</i> .	13	6	6	1
SRDC Recommendation 9C:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 9C be addressed in RULE .	14	7	3	4
Recommend to DOH that SRDC Proposal # 9C be addressed in <i>GUIDANCE</i> .	14	7	6	1
SRDC Recommendation 9D:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 9D be addressed in RULE .	14	10	3	1
Recommend to DOH that SRDC Proposal # 9D be addressed in <i>GUIDANCE</i> .	14	6	8	0

EH&S Principle: Operate & Maintain Schools Effectively—

Topic: Maintenance Plans & Schedules for Routine Items

Issue / Current Status:

Clean, dry buildings do not develop mold problems. Prevention of mold issues requires rapid response to water leaks and proper moisture management. Development of monitoring and response plans, with appropriate cleanup, will allow schools to be proactive in this area. Chemicals and cleaners can present their own hazards and selection needs to be based on the least-hazardous product necessary to the job.

SRDC Proposal # 10: Consolidated Proposal for Maintenance Plans & Schedules for Routine Items

10A

Mold prevention plans are to be established and implemented to address the potential for mold growth and the remediation of mold when it occurs. Key elements of such plans include:

- Identification and resolution of moisture accumulation and water intrusion within the structure and building materials of the school facility
- Monitoring and maintaining ventilation systems. (IAQ18)

10B

Staff and volunteers are to use only cleaning products or other chemicals approved for use by the school district. Donated chemicals or cleaning products must be reviewed and approved by the district. (SAF17)

The least hazardous, or non-hazardous, chemicals are to be used as necessary to effectively accomplish the job while lowering the risk associated with chemical use. (SAF19)

SRDC Recommendation:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 10A be addressed in RULE .	14	8	4	2
Recommend to DOH that SRDC Proposal # 10A be addressed in <i>GUIDANCE</i> .	14	6	7	1
SRDC Recommendation:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 10B be addressed in <i>RULE</i> .	14	11	1	2
Recommend to DOH that SRDC Proposal # 10B be addressed in <i>GUIDANCE</i> .	14	2	12	0

EH&S Principle: Operate & Maintain Schools Effectively—

Topic: Integrated Pest Management

Issue / Current Status:

The field of pest control in public buildings is evolving towards the use of least toxic pesticides, used only when necessary and when non-chemical means of control cannot be used. Routine use of pesticides is not generally healthy for humans or the environment. However, there are occasions when public health does require the use of certain carefully selected chemicals. Planning and a commitment to an IPM method, with regular cleaning and maintenance, and an emphasis on prevention will assist in maintaining a healthy environment.

SRDC Proposal # 11: Consolidated Proposal for Integrated Pest Management

Integrated Pest Management (IPM) is to be used. Remediation of pest-caused damage to the school facility is a component of building maintenance related to Integrated Pest Management. (SAF29)

SRDC Recommendation:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 11 be addressed in <i>RULE</i> .	13	11	2	0
Recommend to DOH that SRDC Proposal # 11 be addressed in <i>GUIDANCE</i> .	13	3	10	0

EH&S Principle: Operate & Maintain Schools Effectively—

Topic: Planning & Preparing to Respond to Events

Issue / Current Status:

Planning for response to an indoor environment event will enable the quick and appropriate actions that protect public health and maintain the confidence of staff, students, and the community. Planning ahead helps to enable open and clear communication; allowing situations to be dealt with as necessary, and without escalation.

SRDC Proposal # 12: Consolidated Proposal for Planning For & Responding To Events

12A

Mold remediation methodologies are to follow national guidance such as that provided by EPA and NYC, including abatement by trained and qualified staff or firms. (IAQ19)

Mold remediation without eliminating the cause—the water intrusion or moisture accumulation—is ineffective in controlling exposure to mold. (IAQ23)

Eliminating the cause of water intrusion or moisture accumulation without remediating resulting mold is an incomplete response. Moist and dry forms of mold can present potential indoor air quality and personal health hazards. (IAQ23)

12B

Mold response plans are to be established and implemented to address the potential for mold growth and the remediation of mold when it occurs. Key elements of such plans include:

- Immediate and appropriate response to mold that is identified, following remediation guidelines from sources including EPA and NYC
- Notification of students, parents, teachers & staff, and visitors regarding mold remediation
- Options to limit exposure to mold until mold remediation is completed, such as those described by DOH guidance to limit exposure (IAQ18)

12C

Schools are required to limit exposure to mold until mold remediation is completed, through the selection of appropriate options, such as those described in DOH guidance. (IAQ24)

SRDC Recommendation 12A:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 12A be addressed in <i>RULE</i> .	14	10	3	1
Recommend to DOH that SRDC Proposal # 12A be addressed in <i>GUIDANCE</i> .	14	6	7	1
SRDC Recommendation 12B:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 12B be addressed in RULE .	14	11	1	2
Recommend to DOH that SRDC Proposal # 12B be addressed in <i>GUIDANCE</i> .	14	4	9	1
SRDC Recommendation 12C:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 12C be addressed in RULE .	14	11	2	1
Recommend to DOH that SRDC Proposal # 12C be addressed in <i>GUIDANCE</i> .	14	4	9	1

EH&S Principle: Operate & Maintain Schools Effectively—

Topic: Playgrounds

Issue / Current Status:

Regular maintenance and inspection is necessary for safe playgrounds. This is especially true of loose surfacing material which needs to be maintained to the required depth and in a "fluffy" condition. Additionally, there needs to be regular inspection on equipment for protrusions, gaps, sheering, etc.

SRDC Proposal # 13: Consolidated Proposals for Playgrounds

Schools must mitigate and remediate known playground soil contamination exceeding Department of Ecology threshold levels. (SAF21)

SRDC Recommendation:	(Modified)	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 13 b	e addressed in <i>RULE</i> .	14	7	4	3
Recommend to DOH that SRDC Proposal # 13 b	e addressed in GUIDANCE.	14	3	11	0

EH&S Principle: Operate & Maintain Schools Effectively—

Topic: Communicating With the Community

Issue / Current Status:

Prompt, open, and clear communication with the students, staff, and the community are important for dealing with an indoor environment issue or other health concern Planning with appropriate staff facilitates communication. The LHJ & DOH can provide expertise in the area of health and risk communication.

SRDC Proposal # 14: Consolidated Proposal for Communicating With the Community

14A

Communication plans are to be established and implemented to assure that staff, students, parents, and users of the facilities are informed about known environmental contamination. Key elements of such plans includes:

- Communication response levels commensurate with the event or condition.
- Rapid communication with the school and notification to the public.
- Site posting.

SRDC Recommendation 14A:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 14A be addressed in <i>RULE</i> .	14	10	4	0
Recommend to DOH that SRDC Proposal # 14A be addressed in <i>GUIDANCE</i> .	14	4	10	0

EH&S Principle: Operate & Maintain Schools Effectively—

Issue / Current Status: (Following statement applies to each parameter and Proposals # 15 — # 20)

EPA and DOH guidance needs to be followed when sampling for lead, copper, cadmium, bacteriological, and other parameters in schools. The frequency of sampling is dependent on initial results, materials used, corrosivity of the water, and water use patterns. Reporting results, notification activities, and follow-up actions due to unsatisfactory results, needs to happen, especially when results are unsatisfactory.

Topic: Lead in Drinking Water

SRDC Proposal # 15: Consolidated Proposal for Lead

Topic Proposal Element

Sample Size: 250 ml sample size (DW01)

Action Level: 20 ppb lead (DW01)

Sample Location: All drinking water sites and fountains. Prioritize other sampling sites based on potential

use and risk. (DW02)

Sampling Frequency: Sample sites on a 3-5 year sampling cycle. Initial sampling priority based on guidance

developed by DOH. (DW03)

Reporting & Provide at least an annual notice, using existing communication methods and maintain a

Notification: notebook or other collection of sampling results in each school. Examples of

communication methods include: sending information home with student, posting information on the school/administration website, making information available at school/administrative building, including information in school newsletter or first day

packet, etc.). (DW04)

SRDC Recommendation:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 15 be addressed in <i>RULE</i> .	14	5	5	4
Recommend to DOH that SRDC Proposal # 15 be addressed in <i>GUIDANCE</i> .	14	7	6	1

EH&S Principle: Operate & Maintain Schools Effectively—

Topic: Copper in Drinking Water

Issue / Current Status: above

SRDC Proposal #16: Consolidated Proposal for Copper

Topic Proposal Element

Sample Size: Guidance for sample size from DOH. (DW07)

Action Level 1.3 mg/L copper (DW07)

Sample Location All drinking water sites and fountains. Prioritize other sampling sites based on potential

use and risk. (DW08)

Sampling Frequency: Initial sampling to coincide with lead sampling. Follow-up sampling is based on a

sampling cycle supported by a plumbing system profile and initial test results. Follow-up testing established with guidance developed by DOH. (DW09)

Reporting & Notification: Provide at least an annual notice, using existing communication methods and maintain a

notebook or other collection of sampling results in each school. Examples of communication methods include: sending information home with student, posting information on the school/administration website, making information available at school/administrative building, including information in school newsletter or first day

packet, etc.). (DW10)

Follow-up: Allow for local decisions to determine remediation actions (e.g., remove fixture, flushing,

post signs, install automatic flushers, install reverse osmosis coolers, etc.). (DW11)

SRDC Recommendation:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 16 be addressed in <i>RULE</i> .	15	8	6	1
Recommend to DOH that SRDC Proposal # 16 be addressed in GUIDANCE.	15	8	6	1

EH&S Principle: Operate & Maintain Schools Effectively—

Topic: Cadmium in Drinking Water

Issue / Current Status: above

SRDC Proposal # 17: Consolidated Proposal for Cadmium

Topic Proposal Element

Sample Size: Guidance for sample size from DOH. (DW13)

Action Level: 0.005 mg/L cadmium (DW13)

Sample Location: Sample all drinking water sites and fountains. Prioritize other sampling sites based on

potential use and risk. If galvanized material not present, sampling not required. (DW14)

Sampling Frequency: The need for cadmium sampling relates to the plumbing profile of the individual building.

Initial testing to coincide with lead and copper sampling. Follow-up testing is based on a sampling cycle supported by a plumbing system profile and test results. Follow-up testing

established with guidance developed by DOH. (DW15)

Reporting & Notification: Provide at least an annual notice, using existing communication methods and maintain a

notebook or other collection of sampling results in each school. Examples of communication methods include: sending information home with student, posting information on the school/administration website, making information available at school/administrative building, including information in school newsletter or first day

packet, etc.). (DW16)

Follow-up: Allow for local decisions to determine remediation actions (e.g., pipe removal, flushing,

post signs, install automatic flushers, install reverse osmosis coolers, etc.). (DW17)

SRDC Recommendation:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 17 be addressed in RULE .	15	8	6	1
Recommend to DOH that SRDC Proposal # 17 be addressed in <i>GUIDANCE</i> .	15	8	6	1

EH&S Principle: Operate & Maintain Schools Effectively—

Topic: Bacteriological Contamination in Drinking Water

Issue / Current Status: above

SRDC Proposal # 18: Consolidated Proposal for Total Coliform

Topic Proposal Element

Sampling: Routine sampling not required. Conduct a building survey to determine if cross

connections exist, rather than require routine sampling. If cross connections are present they need to be eliminated or otherwise addressed to cross-control standards. Conduct

follow-up sampling as guided by DOH. (DW19)

Sampling: Where complaints are made about water bacteriological quality, conduct evaluation, testing,

and remediation, as guided by DOH and local health jurisdictions. (DW20)

Reporting & In addition to requirements for reporting and notification about total coliform imposed by

Notification: state or local rules, use existing communication methods to share information about total coliform contamination. Examples of communication methods include: sending

information home with student, posting information on the school/administration website, making information available at school/administrative building, including information in

school newsletter or first day packet, etc.). (DW21)

Follow-up: Remediate total coliform issues as directed by state and / or local health authorities.

(DW22)

SRDC Recommendation:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 18 be addressed in RULE .	15	6	8	1
Recommend to DOH that SRDC Proposal # 18 be addressed in <i>GUIDANCE</i> .	15	10	5	0

EH&S Principle: Operate & Maintain Schools Effectively—

Topic: Legionella Contamination in Drinking Water

Issue / Current Status: above

SRDC Proposal #19: Consolidated Proposal For Legionella

Topic Proposal Element

Sampling: Routine sampling not required. Sampling required if disease outbreaks occur. If water is

turbid or high in iron, sampling for Legionella should occur. (DW 23, DW24)

Reporting & Use existing communication methods to share information about Legionella contamination.

Notification: Examples of communication methods include: sending information home with student, posting information on the school/administration website, making information available at school/administrative building, including information in school newsletter or first day

packet, etc.). (DW25)

Follow-up: Allow for local decisions to determine remediation actions (e.g., remove fixture from

service, treat distribution systems with superchlorinated water or high temperature and then

flush, post signs, etc.) (DW26)

SRDC Recommendation:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 19 be addressed in <i>RULE</i> .	15	7	3	5
Recommend to DOH that SRDC Proposal # 19 be addressed in <i>GUIDANCE</i> .	15	7	8	0

EH&S Principle: Operate & Maintain Schools Effectively—

Topic: Iron, Manganese, Color, Zinc, Turbidity, And Total Dissolved Solids in Drinking

Issue / Current Status: above

SRDC Proposal # 20: Consolidated Proposal for Iron, Manganese, Color, Zinc, Turbidity, And Total Dissolved Solids

Topic Proposal Element

Sampling: Routine sampling not required. Sample for iron, manganese, color, total dissolved solids,

zinc, and turbidity as appropriate if complaints are received. (DW27,DW29)

Reporting & Use existing communication methods to share information about iron, manganese, color, Notification: total dissolved solids, zinc, and turbidity. Examples of communication methods include:

sending information home with student, posting information on the school/administration website, making information available at school/administrative building, including

information in school newsletter or first day packet, etc.). (DW30)

Follow-up: Allow for local decisions to determine remediation actions (e.g., remove piping, flushing,

post signs, etc.) Follow-up action is to be commensurate with the degree of consumer acceptance of the water quality and consumer's willingness to bear the costs of meeting

the secondary water quality standards. (DW31, DW32)

SRDC Recommendation:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 20 be addressed in <i>RULE</i> .	15	4	5	6
Recommend to DOH that SRDC Proposal # 20 be addressed in <i>GUIDANCE</i> .	15	9	6	0

EH&S Principle: Operate & Maintain Schools Effectively—

Topic: Remediating Drinking Water Pipes With Epoxy Pipe Liners

Issue / Current Status:

Epoxy pipe liners need to meet standards set by NSF International, the Public Health & Safety Company (formally the National Sanitation Foundation). They have generally been tested and used in pipe sizes larger than those used in schools. Concern has been expressed that there may be increased leachate from epoxy pipe liners when used on small diameter pipes. A smaller diameter increases water pressure in the pipes.

SRDC Proposal #21: Consolidated Proposal for Epoxy Pipe Liners

Topic Proposal Element

Standards for use: If epoxy lining is used, it must meet NSF/ANSI Standard 61 certification specifications for

the diameter being lined. (DW35)

Sampling: Following the use of epoxy linings, periodic sampling for coliform, organic chemicals and

leachates must occur. Water quality following the use of epoxy liners must be consistent

with EPA standards for organic chemicals. (DW35)

SRDC Recommendation:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 21 be addressed in RULE .	15	10	4	1
Recommend to DOH that SRDC Proposal # 21 be addressed in <i>GUIDANCE</i> .	15	7	8	0

EH&S Principle: Oversee & Assure School Facility Health & Safety Principles are Applied—

Topic: Trained, Certified, and Skilled Workforce

Issue / Current Status:

Training needs in the areas of health, safety, risk assessment, first aid and CPR have been identified. First aid, CPR, and safety training is generally non-existent, minimal, or inconsistent for teachers, even in high risk areas such as art and shop classes, PE, athletics, etc. Lab safety training is not required as part of science teacher certification or as part of most university science degrees. There are children in our schools with high risk medical conditions, which may or may not be identified, and school staff should be trained to recognize and respond appropriately to medical incidents.

SRDC Proposal # 22: Consolidated Proposal for Training & Certifying a Skilled Workforce

22A

The training, qualifications and certification of school health and safety inspectors is to be addressed by DOH. (SAF04)

Compliance inspections of playgrounds are to be performed by Certified Playground Safety Inspectors. (SAF05)

22B

Teachers are to be required to have safety training appropriate to the classes they teach, updated at appropriate intervals. (SAF09, SAF13)

School administrators are to assess risks in school programs and design and implement training to address the identified risks. (SAF28)

The training is to be presented by certified trainers from a recognized program, such as the American Red Cross or the Evergreen Safety Council, and not be an on-line training unless accepted by the Washington State Department of Labor & Industries. (SAF26)

Teachers, coaches, and school staff are to receive basic training in recognizing and responding to medical conditions specific to children. An increased level of training is required for those responsible for addressing specific medical conditions of individual students. (SAF27)

22C

Staff is to be trained in the use, storage, disposal, and spill clean-up of hazardous chemicals stored or used in their work area. (SAF16)

22D

Training in first aid & CPR, specific to the needs of children, is required on a regular basis for science, Career & Technical, and Physical Education, teachers; playground supervisors; coaches; bus drivers; and some selection of school staff, particularly those staff members that are alone with children.

SRDC Recommendation 22A:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 22A be addressed in <i>RULE</i> .	14	8	5	1
Recommend to DOH that SRDC Proposal # 22A be addressed in <i>GUIDANCE</i> .	14	6	8	0
SRDC Recommendation 22B:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 22B be addressed in <i>RULE</i> .	14	10	2	2

Recommend to DOH that SRDC Proposal # 22B be addressed in <i>GUIDANCE</i> .	14	3	10	1
SRDC Recommendation 22C:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 22C be addressed in <i>RULE</i> .	14	11	2	1
Recommend to DOH that SRDC Proposal # 22C be addressed in <i>GUIDANCE</i> .	14	5	8	1
SRDC Recommendation 22D:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 22D be addressed in <i>RULE</i> .	14	11	2	1
Recommend to DOH that SRDC Proposal # 22D be addressed in <i>GUIDANCE</i> .	14	4	10	0

EH&S Principle: Oversee & Assure School Facility Health & Safety Principles are Applied—

Topic: Safety Hazards and Exposures in Special Use, Storage and Athletics Areas

Issue / Current Status:

Health and safety risk assessment and control contribute to a safe environment. Review and updating of plans and training allow for response and consideration of injury and health research. There are areas of concern not addressed in the current WAC that need to be addressed. Sports, athletics, and PE have specific health and safety concerns, including sanitation needs. The emergence of MRSA (Methicillin-resistant Staphylococcus aureus) skin infections as a public health issue in athletics is one example.

SRDC Proposal # 23: Consolidated Proposal for Safety Hazards & Exposures in Special Use, Storage and Athletics Areas

Schools are to address safety & health risks to students, establish protective processes, procedures, engineered controls, and provide hazard training and personal protective equipment for students appropriate to the classroom activities and hazards. Prior to students engaging in classes they are to sign a written contract agreeing to follow safety rules. (SAF10, SAF14)

WAC 246-366-140 Safety is to be modified, to include sports, athletics, and PE in the list specifying that "The secretary in cooperation with the state superintendent of public instruction shall review potentially hazardous conditions in schools which are in violation of good safety practice, especially in laboratories, industrial arts, vocational instruction, sports, and athletics and physical education areas. They shall jointly prepare a guide for use by department personnel during routine school inspections in identifying violations of good safety practices. The guide should also include recommendations for safe facilities and safe practices." (SAF24, SAF08, SAF12)

Recommend that a requirement for proper sanitation and infection control be addressed in a specific subsection WAC 246-366. Supporting specific recommendations and best management practices should be in guidance, such as the K-12 H&S guide, and the DOH/OSPI Infectious Disease Control Guide. (SAF25)

SRDC Recommendation:		GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 23 be addressed in RULE .	14	11	2	1
Recommend to DOH that SRDC Proposal # 23 be addressed in <i>GUIDANCE</i> .	14	4	10	0

EH&S Principle: Oversee & Assure School Facility Health & Safety Principles are Applied—

Topic: Frequency Of Rule Development And Updating Of Standards

Issue / Current Status:

It has been over 30 years since the last major update on the School health and safety rules. It is the intent of the State of Washington to review regulations every 5 years. There is a need to ascertain if the rules adopted by this action are useful, effective, and appropriate. Environmental health and safety concerns evolve overtime and the school rule should be timely and appropriate for children's health and safety.

SRDC Proposal # 24: Consolidated Proposal for Rule Development Frequency

Within 5 years of the effective date of the new / revised school environmental health and safety rules, the DOH is to conduct a 5-year periodic review of the status and effectiveness of this rule implementation. The department is to submit the results of their review to the State Board of Health, including any recommendations for subsequent rule revision. (IAQ32)

SRDC Recommendation:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 24 be addressed in RULE .	13	13	0	0
Recommend to DOH that SRDC Proposal # 24 be addressed in <i>GUIDANCE</i> .	14	1	3	10

EH&S Principle: Oversee & Assure School Facility Health & Safety Principles are Applied—

Topic: Guidance Documents

Issue / Current Status:

Rules establish what needs to be accomplished. Guidance documents, such as the K-12 Health & Safety Guide from DOH & OSPI, provide needed additional detail and approaches of how to accomplish regulations. The recommendations of the SRDC will need to be supported by new and updated guidance.

SRDC Proposal #25: Consolidated Proposal for DOH-Developed Guidance

Guidance documents are to be developed, updated, and distributed to address the following topics:

- ► Drinking water sampling frequency for:
 - ▷ Lead (DW03)
 - ▷ Copper (DW09)
 - Cadmium (DW15)
- ► Drinking water sample size for:
 - ▷ Copper (DW07)
 - Cadmium (DW13)
- ► Drinking water sampling for:
 - ▶ Iron, manganese, color, zinc, turbidity, total dissolved solids, zinc and turbidity, including the options for 3rd party testing. (DW28)
- ► Remediation actions, methodologies and follow-up strategies for:
 - ▶ Lead (DW06)
 - Copper (DW12)
 - Cadmium (DW18)
- ► Follow-up sampling, evaluation, testing, remediation actions, methodologies and strategies for total coliform. (DW19, DW20)
- The use of epoxy linings, including the follow-up to using epoxy linings. (DW36)
- ▶ Building maintenance, including "green cleaning" materials and methods, and recommendations for frequency of various cleaning activities. (IAQ26, IAQ27)
- ▶ Ventilation systems, including references to the current ASHRAE 62.1 standard, and system maintenance and service, based on guidance available from, EPA, ASHRAE, and other sources. (IAQ04, IAQ28)
- ► Humidity conditions that may contribute to health problems. (IAQ31)
- ▶ Approaches to monitor for water intrusion and moisture problems within their schools including the use of moisture meters to assess the moisture content of building materials used in the school facility. Guidance to include suitable options in response to identified water intrusion and moisture accumulation. (IAQ21)
- ► The full range of water intrusion and moisture accumulation events that may occur in the school facility environment. Include strategies to identify, correct, and mediate problems resulting from water intrusion and moisture accumulation when visual confirmation of suspected problems is not achieved. (IAQ22)
- A range of options available to school administrators to accommodate sensitive and concerned individuals limiting their exposure to mold until mold remediation is completed. (IAQ24)
- ► Environmental Site Assessments (ESA), including the elements of an ESA and criteria for determining the appropriate time in the school development timeline to conduct an ESA. (IAQ08)
- ▶ Design and occupancy loading of laboratory classrooms and lab-support facilities. This guidance development by DOH is to be in conjunction with OSPI and others. (SAF11)
- ▶ Identification and guidelines for health and safety concerns with athletics and sports. (SAF 24)
- ▶ Proper sanitation and infection control is to be addressed in a specific subsection WAC 246-366. Supporting specific recommendations and best management practices are to be addressed in guidance, such as the K-12 H&S guide, and the DOH/OSPI Infectious Disease Control Guide. (SAF25)

SRDC Recommendation:	# Voting	GRN	YEL	RED
Recommend to DOH that SRDC Proposal # 25 be addressed in <i>RULE</i> .	13	7	6	0
Recommend to DOH that SRDC Proposal # 25 be addressed in <i>GUIDANCE</i> .	13	8	3	2

Outstanding Issues Decision Agenda Remaining issues developed by the SRDC for consideration

Topic	Rule Implementation & Compliance				
Problem Statement	 Historically and currently DOH's role is training and consultation in school EH&S. Implementation and enforcement is the LHJ's responsibility. LHJ EH programs generally are supported by fees and grants, not taxes. Therefore, for the most part only those LHJs where their local BOH has authorized a fee for school inspections perform them. All LHJs conduct plan reviews and pre-opening inspections under WAC 246-366, but capacity for this varies. Some do very few and don't feel that they can keep skills up. In some areas, LHJs do not receive the school plans in a timely manor. All LHJs do plan reviews and pre-opening inspections, and food service inspections. These are supported by fees. They also respond to complaints relevant to EH&S. There is currently no centralized, statewide, formal reporting (data collection) mechanism for injuries or accidents relevant to school EH&S, & DOH has no authority to investigate incidents. This handicaps the development of training, guidance and enforcement. WAC 246-366 states that the regulations are for K-12 schools. Many schools now include a preschool with their elementary programs. It has been questionable whether the regulations can be enforced in the preschool part. Currently in Washington State, unless a preschool is part of Head Start, ECEAP (Early Childhood Education and Assistance Program), or a daycare, it is not covered by environmental health and safety regulations in Washington State. There is no requirement that schools include a health room in their design. 				
Reference / Research	Local Health Jurisdiction School Environmental Health Program Survey, January 2004 Washington State Board of Health School Environmental Health Rule Review, July 9, 2003				
Proposal A:	Define/describe authority and a delineated pathway for compliance with requirements, from cooperative efforts to enforcement steps, through working with appropriate agencies. The process shall include a well defined appeals and complaint procedures.	Level of Support	Workgroup Vote GRN YEL RED 14 0 0		
Proposal B:	B1 DOH is given authority to work with LHJs to investigate school related environmental health and safety incidents. B2 B1 DOH is given authority to work with LHJs to investigate school related environmental health and safety incidents.		Workgroup Vote GRN YEL RED 10 3 1		
	DOH is given authority to collect and analyze student injury and incident data derived from a statewide reporting system developed through a cooperative effort of appropriate agencies.	B2	13 1 0		
Proposal C:	The role of DOH in LHJ implementation of the SBOH environmental health & safety rules for schools is to be established.	Level of Support	Workgroup Vote GRN YEL RED 13 1 0		
Proposal D:	Annual school EH&S inspections are to be required, except where LHJs establish a school program with an alternative schedule that accomplished the goals of the SBOH rules for environmental health and safety in schools.	Level of Support	Workgroup Vote GRN YEL RED 14 0 0		

Proposal E:	Health rooms are recommended and where provided, should be designed to isolate student(s). Building consideration should include such things as: separate ventilation; visual supervision; confidentiality; cleanable, disinfectable surfaces; proximity to restrooms; and resting facilities.	Level of Support	Worl GRN 14	yEL 0	Vote RED 0	
Topic	DOH Rule Implementation Activities					
Problem Statement	 Issues have been raised throughout the Rule Revision Process that identify a lack of implementation and enforcement, poor supervision, inadequate and untimely response to problems, lack of coordination between agencies, and a lack of resources and training have all contributed to indoor air quality problems, safety incidents, and other school EH&S problems. WAC 180-27-080 requires and pays for value engineering (VE) studies, constructability reviews (CR), and building commissioning on state match projects exceeding 50,000 ft² (optional for 15,000-50,000). One of the objectives for the SBOH in the rule revision is to make sure that conflicts are avoided with other agency rules, but to also make sure the minimum environmental health and safety standards are covered. The issue has been raised as to whether there needs to be commissioning required on smaller projects, and on non-state match projects, to ensure school EH&S. VE is an assessment to help control costs and maximize value. CR is to determine that the building can be built as designed. Functional performance standards are proposed as a way to cover all 3 areas. 					
Reference / Research	WAC 180-27-080 RCW 43.20.050, 43.20.130 Administrative Recommendations: Investigation of School Construction and Electrical Licensing Activities, Attorney General of Washington, 9/25/96. http://www.atg.wa.gov/releases/rel_construction_092996.html					
	The SRDC requests DOH work cooperatively with other entities on activities and efforts that: ☑ Support expanding the scope of building system	Support indication	Worl	kgroup <i>YEL</i>	Vote RED	
	commissioning in new and remodeled school facilities, to include the full range of systems in school facilities		14	0	0	
Proposal A:	(such as HVAC, electrical, plumbing, etc.) ✓ Lead to the development and application of standard commissioning test methods and desired outcomes. ✓ Incorporate past experiences with school facility design, construction, and operation in the development of informational materials, guidance, and training curriculum for persons associated with the development of school facilities. ✓ Establish and build on links with various entities to facilitate the delivery of coordinated training for school and LHJ personnel with responsibilities for environmental health & safety in schools. (Entities such as WASBO, EH Directors, WAMOA, ESDs, DOH, etc.) ✓ Promote regional cooperation and delivery of services for design development & review, construction management, and commissioning. ✓ Seek to increase local and regional capacity to meet the needs for school facility plan review and construction oversight in those areas of Washington where such capacity is lacking.					